IHS Clinical Indicators

2004-2005

Indicator 7: Mammography Screening

- “During FY 2005, maintain the proportion of female patients ages 52-64 who have had mammography screening within the last two years at the FY 2004 level.”
- Because GPRA data “looks back” two years, this means that all women ages 50-64 are eligible for screening.
- The IHS mammography screening rate in FY 2004 and FY 2003 was 40%.

Breast Cancer Statistics

- Breast cancer is the second most commonly diagnosed cancer among American women, after skin cancer.
- Breast cancer is also the second leading cause of cancer death among U.S. women, after lung cancer.
- The American Cancer Society estimates that in 2005, 211,240 women will be diagnosed with breast cancer, and 40,410 will lose their lives to the disease.

Breast Cancer Among AI/AN Women

- Although the incidence of breast cancer among AI/AN women is lower than that of other racial and ethnic groups, **breast cancer is still the second leading cause of cancer death** among AI/AN women.

- Alcohol consumption, low levels of physical exercise and obesity, health risks often found in the AI/AN community, have been linked to increased risk of breast cancer.

Mammography Screening

- Mammography is the best way to detect breast cancer in its earliest, most treatable stage—an average of 1–3 years before a woman can feel a lump.
- Mammography also locates cancers too small to be felt during a clinical breast examination.
- Mammography detects an average of 90% of breast cancers in women without symptoms.

Regular mammography screening reduces breast cancer mortality rates

- Thanks to more widespread use of mammography, since the late 1980s, breast cancer mortality rates have declined among women of all races. Between 1990 and 2000, the overall breast cancer death rate declined 2.3% each year.

- The decrease is the result of both earlier detection through screening and improved treatment.

Regular mammography screening reduces breast cancer mortality rates

- One major review study found an average 24% percent mortality reduction associated with regular mammography screening.

- According to the CDC, regular screening of women ages 40 and over could reduce breast cancer mortality by approximately 16% overall, and up to 30% for women over age 50.

US Preventative Services Task Force conclusions on mammography

- In 2002, the US Preventative Services Task Force concluded there was fair evidence that mammography screening every 1-2 years could reduce breast cancer mortality by approximately 20 percent to 25 percent over 10 years.

CDC recommendations for screening in women over age 50

- The CDC recommends that women between the ages of 50 and 74 receive a mammogram every 1-2 years.

- Because 75% percent of all diagnosed cases of breast cancer are among women aged 50 years or older, biennial screening of women between the ages of 50 and 69 has been shown to be a particularly cost-effective way to decrease the breast cancer mortality rate.

Mammography screening rates: overall

- According to the Behavioral Risk Factor Surveillance System (BRFFS), in the year 2000, 62.2% of all women age 40 and over had received mammography screening.

- Women with less than a high school education, without heath insurance, or members of an ethnic minority were less likely to have had a recent mammogram.

Mammogram screening rates: disparities

- American Indian and Alaska Native women report significantly lower screening rates than other races. According to the CDC:
  - 71.4% of white women age 40 and over reported having a mammogram within the past two years.
  - 47.3% of AI/AN women age 40 and over reported having a mammogram within the past two years.

Mammogram screening rates: disparities, cont.

- Another survey found that 54% percent of American Indian and Alaska Native women aged 50 years and older had ***not*** had a mammogram in the past 24 months.

- The overall IHS mammogram screening rate is 40% (FY 2004 and FY 2003).

AI/AN women are not experiencing the same decline in mortality rates

- Although breast cancer *incidence* rates have declined slightly in AI/AN women in recent years, the mortality rate has not gone down.

- From 1992 to 2000, death rates from breast cancer declined annually by:
  - 2.6% for whites
  - 1.4% for Hispanics
  - 1.1% for African Americans and Asian Americans
  - 0% for American Indians and Alaska Natives

Indicator 9: Colorectal Cancer Screening (FY06 indicator)

- “During FY 2006, establish baseline rate of colorectal cancer screening for eligible patients.”

- Eligible patients are all men and women aged 51 to 80.

Colorectal Cancers

- Although colorectal cancer mortality rates have declined since the mid 1970s, colorectal cancers are the third most common cancers in the United States, and are the third leading cause of cancer deaths.

- An estimated 145,290 new cases of colorectal cancer and 56,290 colorectal cancer-related deaths are projected to occur in 2005 in the United States.

Colorectal Cancer rates among American Indians

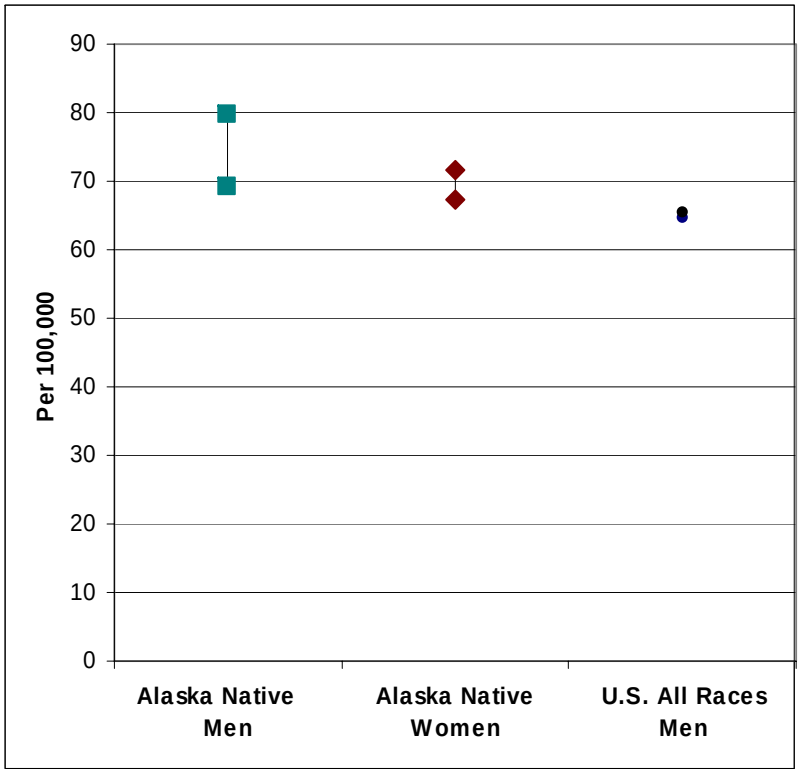
- While colorectal cancer rates among American Indians are low compared to the overall US average, there is strong evidence that the number of colorectal cancer cases among American Indians has been rising in recent years.

- Since the 1980s, the incidence of colon and rectum cancers among American Indian men in New Mexico has more than tripled.

Colorectal Cancer rates among Alaska Natives

- Colorectal cancer rates among Alaska Natives are well above the national average.
- Studies have found rates of 69.3 to 79.7 per 100,000 among Alaska Native men, and 67.4 to 71.4 per 100,000 among Alaska Native women (about twice the overall US average for women).
- Among all Alaska Natives, mortality from colorectal cancer is also much higher than the US average.

Colorectal Cancer Incidence



Range:

Alaska Native Men

(69.3-79.7)

Alaska Native Women

(67.4-71.4)

All Races Males

(64.5-65.5)

AI/AN colorectal cancer mortality rates

- AI/AN mortality rates from colorectal cancer are high, when compared to incidence rates.

- Among AI/AN men, for example, the overall colorectal cancer incidence rate is 38.3 per 100,000, compared to 63.4 per 100,000 for men of all races. However, the mortality rate among AI/AN men is 17.1 versus 25.3 for men of all races.

- So while AI/AN men have an *incidence* rate that is 60% of the all races average, their *mortality* rate is 68% of the all races average.

Colorectal cancers in AI/ANs are less likely to be diagnosed at early stages

- Between 1992 and 2000, over 23% of the colorectal cancers found in AI/ANs were at the “distant” stage, compared to 19% of those in non-Hispanic whites.

- Relative five-year survival rates for colorectal cancers:
  - Local stage: 90%
  - Regional stage: 67%
  - Distant stage: 10%

Colorectal Cancer risk factors

- Low levels of exercise, high-fat, low-fiber diets, and low consumption of fruits and vegetables, are all associated with an increased risk of colon and rectum cancers.

- Surveys of the Alaska Native diet have reported several risk factors, including very low intake of fruit and vegetables, low levels of dietary fiber, and high intake of refined carbohydrates and sugars.

Colorectal Screening

- Screening tools (at predefined intervals):
  1. Fecal Occult Blood lab test (FOB)
  2. Rectal exam (as surrogate for FOB- will be eliminated in FY 06)
  3. Flexible Sigmoidoscopy
  4. Rigid proctosigmoidoscopy
  5. Double contrast barium enema
  6. Colonoscopy

Measuring Colorectal Screening in the CRS system

- Includes patients who have had any CRC screening, defined as any of the following:
- 1) Fecal Occult Blood test or Rectal Exam in the past 2 years; or
- 2) flexible sigmoidoscopy or double contrast barium enema in the past 5 years; or
- 3) colonoscopy in the past 10 years; or
- 4) a documented refusal of any test in the past year.

Screening recommendations from the CDC

- The CDC recommends that men and women begin regular colorectal cancer screening when they reach age 50 using one or a combination of four recommended screening tests at pre-defined intervals: fecal occult blood test, sigmoidoscopy, colonoscopy, or barium enema.

US Preventive Services Task Force Guidance

- The USPSTF “found fair to good evidence that several screening methods are effective in reducing mortality from colorectal cancer.”

- Studies reviewed by the USPSTF “indicate that colorectal cancer screening is likely to be cost-effective (less than $30,000 per additional year of life gained) regardless of the strategy chosen.”

Effectiveness of Colorectal Screening

- Colorectal cancers have long asymptomatic periods during which they can be diagnosed and treated. Appropriate screening of patients and removal of polyps reduce the rates and lethality of colorectal cancers.
- For example, yearly fecal occult blood screening has been shown to result in a 33.4 percent reduction in colorectal cancer mortality.

Indicator 11: Alcohol Screening and Fetal Alcohol Syndrome Prevention

- "During FY 2005, increase rate of screening for alcohol use in a defined group of female patients of child-bearing age."
- Includes female patients ages 15-44.

FAS: A permanent condition

- Fetal Alcohol Syndrome (FAS) is the leading known cause of mental retardation.
- Children with FAS may have abnormal facial features, growth retardation, central nervous system problems, learning disabilities, social and behavioral problems, memory and attention span difficulties, and vision and hearing deficiencies.
- FAS can be prevented completely, if a woman does not drink alcohol while she is pregnant.

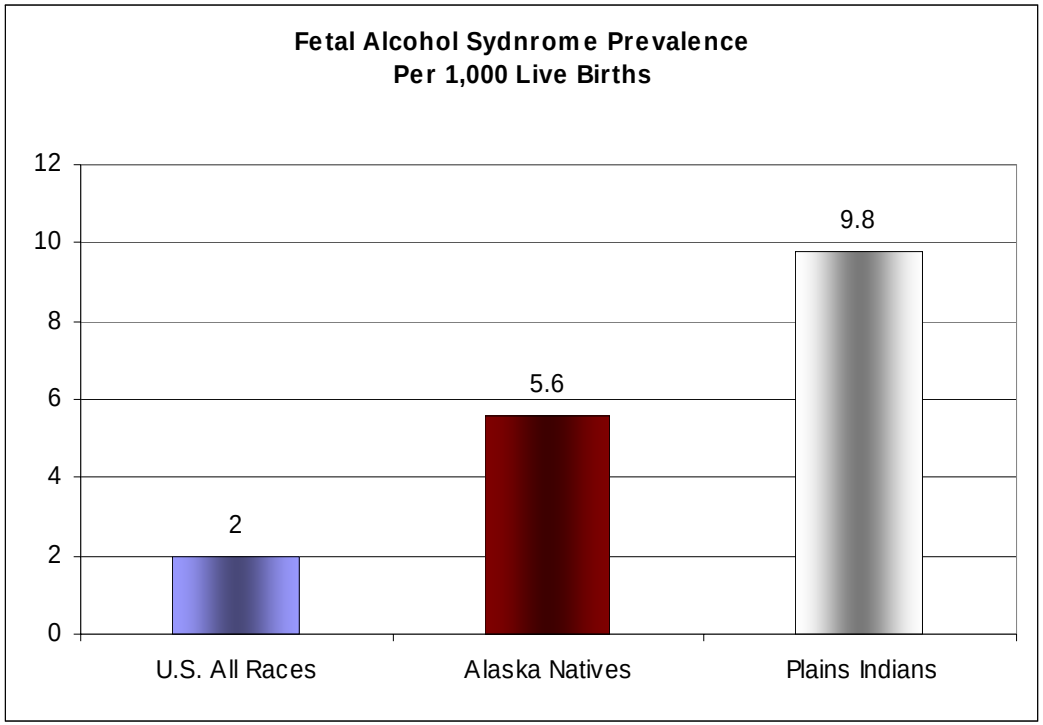
Other potential effects of alcohol use during pregnancy

- Alcohol-Related Neurodevelopmental Disorder (ARND) and Alcohol-Related Birth Defects (ARBD) can also result from alcohol consumption during pregnancy. These conditions are believed to occur approximately three times as often as FAS.
- ARND manifests as central nervous system developmental abnormalities and/or behavioral or cognitive abnormalities.
- ARBD defects include those of the heart and kidneys, as well as vision and hearing defects.

Fetal Alcohol Syndrome Rates

- The prevalence of FAS in the general US population ranges from 0.5 to 2 cases per 1000 live births.
- AI/AN FAS rates are much higher. One study found a FAS rate of 9.8 per 1000 live births among Southwestern Plains Indians on reservations.
- Another study found AI/AN FAS rates of 5.6 per 1000 in Alaska, and 2.5 per 1000 in Arizona, well above that of any other race or ethnicity.

Fetal Alcohol Syndrome



Alcohol consumption among AI/AN women of childbearing age

- Studies have found alcohol consumption rates among AI/AN women of childbearing age to be higher than average.

- One study of alcohol consumption in Alaska found that the rate of heavy drinking among AI/AN women was 32%, compared to 15% of non-AI/AN women. The study also found that AI/AN women had less knowledge of the harmful effects of alcohol during pregnancy than non-AI/AN women.

A potential link between SIDS and drinking during early pregnancy

- A study of Northern Plains Indians identified drinking during early pregnancy as an increased risk factor for Sudden Infant Death Syndrome (SIDS). It found a six-fold increased risk of SIDS among mothers who had used any alcohol in the first trimester, and an eight-fold increased risk among those who had engaged in binge drinking in the first trimester.

- The rate of SIDS among American Indians is consistently above the US average (1.5 per 1000 compared to 0.7 per 1000 for whites in 1999.)

Alcohol Screening as a tool for FAS prevention

- Screening with intervention has been shown to be effective in reducing alcohol misuse in pregnancy. Studies have shown that even brief interventions, with counseling, can significantly reduce the rate of alcohol use during pregnancy among women with a history of heavy drinking.

Screening Recommendations, CDC

- The CDC recommends FAS prevention efforts be targeted at:

  1) pregnant women who drink

  2) childbearing-aged women who are drinking at high-risk levels, and engaging in unprotected sex.

Screening Recommendations, USPSTF

- The US Preventive Services Task Force has concluded that behavioral counseling interventions for alcohol misuse are effective among women of childbearing age.

- The USPSTF recommends screening and behavioral counseling interventions to reduce alcohol misuse by pregnant women.

Indicator 16: Domestic Violence Screening

- “During FY 2005 the IHS will address domestic violence, abuse, and neglect by maintaining the proportion of women who are screened for domestic violence at the FY2004 rate.”

- The FY 2004 indicator called for screening at least 15% of eligible women patients for domestic violence at direct care facilities.

Violence against women

- Approximately 4.4 million adult American women are abused by their spouse or partner each year.
- 30% of women in the United States experience domestic violence at some time in their lives.
- Women are 7 to 14 times more likely to suffer a severe physical injury from an intimate partner than men.

Young women and domestic violence

- Women ages 16-24 are the group most likely to be victims of Intimate Partner Violence.
- Women in their high-school years to their mid-20s are nearly three times as vulnerable to attack by a husband, boyfriend or former partner as those in other age groups.
- Sixteen out of every 1,000 women between the ages of 16 and 24 were attacked by an intimate partner in 1999 – the highest rate of any age group.

Effects of domestic violence

- Symptoms of domestic violence may appear as injuries or chronic conditions related to stress.

- Women who experience domestic violence are more often victims of nonconsensual sex. They also have higher rates of smoking, substance abuse, chronic pain syndromes, depression, anxiety, and Post-Traumatic Stress Disorder.

Domestic violence in the AI/AN community

- American Indian and Alaska Native women experience domestic violence at rates higher than the national average.
- 13.5% of Navajo women seeking routine care at an IHS facility reported physical abuse in the past year; 41.9% had experienced physical abuse from a male partner at least once in their lives.
- 75% of women in the San Carlos Apache tribe reservation reported violence in their current relationship.

IPV during pregnancy: special concern

- Women may experience the start or escalation of violence during pregnancy.
- A review study found that an average of 4 to 8% of women had experienced intimate partner violence during pregnancy.
- In a survey of pregnant women at the Albuquerque Indian Hospital, 16% of women reported experiencing domestic violence within the last year.

Risks of IPV during pregnancy

- Abused pregnant women are at higher risk for infections, low birth weight babies, smoking, use of alcohol and drugs, maternal depression and suicide than non-abused pregnant women.

- Routine screening for intimate partner violence during pregnancy, with appropriate intervention, can help prevent more trauma.

Indicator 31: Obesity Screening

- “During FY 2005 , each area will increase the number of patients for whom BMI data can be measured by 5%.”

- “During FY 2006, decrease the obesity rates in children, aged 2-5 years.” (Indicator is under review and may be changed.)

BMI as measure of obesity rates

- Body Mass Index (BMI) measures a person's weight in relationship to their height. BMI can indicate whether a person is overweight (BMI of 25-30), obese (BMI of over 30) or at a healthy weight (BMI of 20-25).

- According to the US Preventive Services Task Force, BMI measurement provides a reliable way to identify adults at increased risk for mortality and morbidity due to overweight and obesity.

Obesity prevalence among adults

- An estimated 65% of U.S adults aged 20 years and older are either overweight or obese, defined as having a body mass index (BMI) of 25 or more.

- About 31% of U.S. adults, over 61 million people, are obese, defined as having a BMI of 30 or more.

Obesity among American Indians

- Rates of obesity and overweight among American Indian and Alaska Native populations in many cases exceed the national averages.

- Among Pima Indians, estimates of the prevalence of overweight and obesity range from 61% to 78% for men, and 81% to 87% for women. One study found rates of overweight and obesity of 54% to 67% in men aged 45 to 74, and 66% to 80% of women aged 45 to 74.

Obesity among American Indians

- The Navajo Health and Nutrition Survey found that one third of Navajo men aged 20-39 and one half of men aged 40-59 were overweight. Two-thirds or more of Navajo women in all age groups were overweight.

- By comparison, in 1953, the overweight rate among Navajos was less than 5% among men, and 15% among women.

Risks of obesity

- Obesity increases the risk of developing a number of health conditions, including type 2 diabetes, high blood pressure, high cholesterol, asthma, arthritis, coronary heart disease, stroke, colon cancer, post-menopausal breast cancer, endometrial cancer, gall bladder disease, and sleep apnea.

Obesity risks for American Indians

- Obesity is a major risk factor for type 2 diabetes among American Indians and Alaska Natives. Type 2 diabetes affects over 25 percent of the AI adult population.

- One-half of adult Pima Indians have diabetes and 95% of those with diabetes are overweight.

Childhood obesity

- Health problems stemming from obesity and overweight are not limited to adults. In the US:
  - 15% of children between ages 6 and 19 are overweight.
  - 10% of children between ages 2 and 5 are overweight.

Childhood obesity risks

- Obesity in childhood has been linked to increased risk for type 2 diabetes and cardio-vascular disease.

- Obesity in childhood often persists into adulthood and is associated with significant health risks.

Assessing BMI in children

- BMI is used differently for children than adults. Also called “BMI-for-age,” this measurement is plotted on gender-specific growth charts and evaluated according to the following criteria:

  Underweight: BMI-for-age < 5th percentile

  At risk of overweight: BMI-for-age 85th percentile to < 95th percentile

  Overweight: BMI-for-age ≥ 95th percentile

Obesity rates among AI children

- AI children have rates of overweight higher than the US average. Studies have found the percentage of AI children with a BMI above the 85th percentile to be consistently higher than that of children of other races.

- A study published in the *American Journal of Clinical Nutrition* in 1999 estimated the overall prevalence of overweight among AI children ages 6 to 19 to be 39% (versus 15% for all races combined). The next closest rate was found among Mexican American children (29%).

Obesity rates among AI children

- A “Pathways” study of AI children aged 6-11 from seven communities found that 28.6% had a BMI above the 95th percentile (US average: 11%.)

- Studies of AI children aged 2 to 5 have found overweight/obesity rates from 12 to 39 percent (US average: 10%).

Effects of prevention and intervention

- Studies have demonstrated that a structured intervention consisting of dietary change, weight loss, and increased physical activity can reduce the risk that impaired glucose tolerance will progress to diabetes mellitus.

- Research has also shown that structured programs that focus on lifestyle changes in exercise and diet can improve fitness, decrease BMI, and lower cholesterol.

Healthy People 2010 goals for obesity reduction

- Reduce the proportion of adults who are obese to 15%.

- Reduce the proportion of children and adolescents (ages 6-19) who are overweight or obese to 5% (defined as at or above the gender- and age-specific 95th percentile of BMI.)

Indicator 24: Childhood Immunization

- “In FY 2005, maintain baseline FY 2004 rates for recommended immunizations for AI/AN children ages 19-35 months.”

- Full immunization includes all vaccines in the 4:3:1:3:3 series.

4:3:1:3:3 series includes:

- 4 or more doses of DTaP (diphtheria, tetanus, and pertussis vaccine)
- 3 or more doses of IPV (poliovirus vaccine)
- 1 or more doses of MCV (measles-containing vaccine such as the MMR)
- 3 or more doses of the Hib vaccine (Haemophilus influenzae type b)
- 3 or more doses of HepB (hepatitis B vaccine)

Immunizations among children

- In recent years, vaccination coverage has increased significantly among young children. In the 1990s, government and private sector initiatives helped to remove barriers to routine childhood vaccinations.

- Routine immunizations represent a cost-effective public health measure that significantly improves the health of children. Childhood deaths from diseases preventable through routine immunization are now very unusual.

Vaccine Coverage, 2003

- Among all US children aged 19-35 months, vaccine coverage in 2003 reached an all-time high.
- The Healthy People 2010 goal is 90% coverage for all routine immunizations for children aged 19-35 months.
- National coverage levels are now over 90 percent for each vaccine recommended through age 35 months, except the Varicella and Pneumococcal vaccines (which are not part of the 4:3:1:3:3 series), and the fourth dose of DTaP.

Vaccine disparities

- Poorer children are less likely overall to receive full vaccination than their wealthier counterparts.

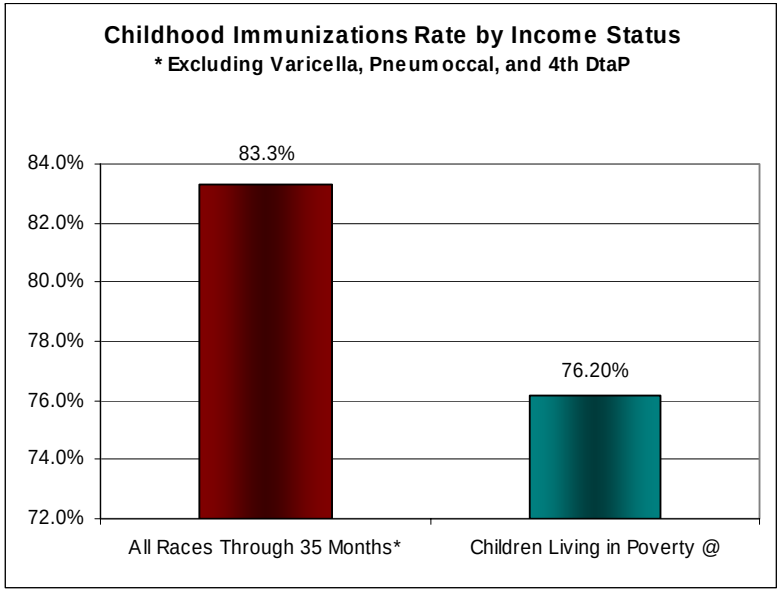
- However, poorer children with regular access to a primary care can achieve vaccination rates similar to wealthier children.

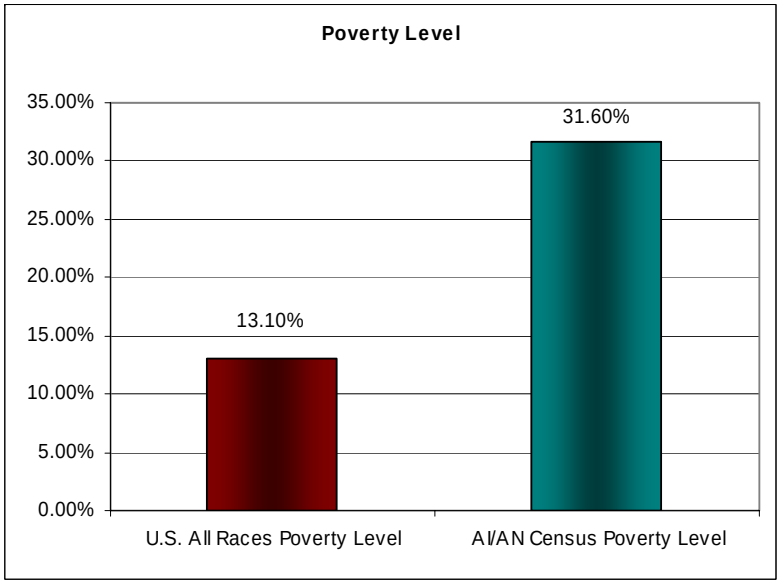
Vaccine disparities

- In 2003, 83.3% of children aged 19-35 months from households with incomes at or above the poverty line received the 4:3:1:3 series of recommended immunizations, compared with 76.2% of children living below the poverty line.

- For the 4:3:1:3:3 series, the rates were 81.3% of children above the poverty line versus 75% of children below the poverty line.

Childhood Immunizations & Poverty





Rates of vaccination among AI/AN children

- The National Immunization Survey collects information on vaccinations given to children aged 19-35 months.
- NIS statistics show that AI/AN children have vaccination rates that are below the national averages.
- According to the NIS, in 2003, **74.9%** of AI/AN children received the 4:3:1:3:3 series, compared to 82.5% of whites, and 79.4% of all races.